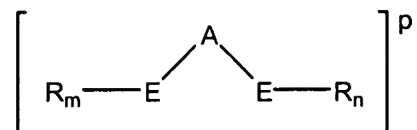


wherein M is a Group 9, 10 or 11 metal; L is a bidentate ligand defined by the formula:



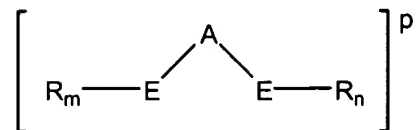
wherein A is a bridging group containing a Group 13-15 element; each E is independently a Group 15 or 16 element bonded to M; each R is independently a C<sub>1</sub>-C<sub>30</sub> containing radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, halocarbyl-substituted organometalloid, m and n are independently 1 or 2 depending on the valency of E; and p is the charge on the bidentate ligand such that the oxidation state of MX<sub>r</sub> is satisfied;

each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; or two X's are joined and bound to the metal atom to form a metallacycle ring containing from about 2 to about 20 carbon atoms; a neutral hydrocarbyl-containing donor ligand; a [halogen, an alkoxide, an aryloxy, an amide, a phosphide, or other] univalent anionic ligand; or two X's are joined to form an anionic chelating ligand; or a neutral non-hydrocarbyl atom containing donor ligand; and r is 1, 2 or 3.

6. (Twice Amended) A late transition metal catalyst system for polymerization of olefin monomers comprising a Group 9, 10 or 11 metal complex stabilized by a bidentate ligand, and an organoaluminum compound immobilized on a solid support, the Group 9, 10 or 11 metal complex stabilized by a bidentate ligand of the formula:



wherein M is a Group 9, 10 or 11 metal; L is a bidentate ligand defined by the formula:



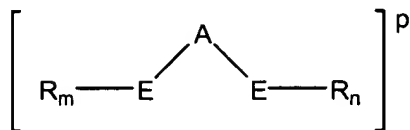
wherein A is a bridging group containing a Group 13-15 element; each E is independently a Group 15 or 16 element bonded to M; each R is independently a C<sub>1</sub>-C<sub>30</sub> containing radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, halocarbyl-substituted organometalloid, m and n are independently 1 or 2 depending on the valency of E; and p is the charge on the bidentate ligand such that the oxidation state of MX<sub>r</sub> is satisfied;

each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; or two X's are joined and bound to the metal atom to form a metallacycle ring containing from about 2 to about 20 carbon atoms; a neutral hydrocarbyl-containing donor ligand; a [halogen, an alkoxide, an aryloxy, an amide, a phosphide, or other] univalent anionic ligand; or two X's are joined to form an anionic chelating ligand; or a neutral non-hydrocarbyl atom containing donor ligand; and r is 1, 2 or 3.

13. (Twice Amended) A late transition metal catalyst system essentially without residual solvent for polymerization of olefin monomers comprising a Group 9, 10 or 11 metal complex stabilized by a bidentate ligand immobilized on a solid support, the Group 9, 10 or 11 metal complex stabilized by a bidentate ligand of the formula:



wherein M is a Group 9, 10 or 11 metal; L is a bidentate ligand defined by the formula:



wherein A is a bridging group containing a Group 13-15 element; each E is independently a Group 15 or 16 element bonded to M; each R is independently a C<sub>1</sub>-C<sub>30</sub> containing radical or diradical group which is a hydrocarbyl, substituted hydrocarbyl, halocarbyl, substituted halocarbyl, hydrocarbyl-substituted organometalloid, halocarbyl-substituted organometalloid, m and n are independently 1 or 2 depending on the valency of E; and p is the charge on the bidentate ligand such that the oxidation state of MX<sub>r</sub> is satisfied;

each X is, independently, a hydride radical, a hydrocarbyl radical, a substituted hydrocarbyl radical, a halocarbyl radical, a substituted halocarbyl radical, hydrocarbyl-substituted organometalloid or halocarbyl-substituted organometalloid; or two X's are joined and bound to the metal atom to form a metallacycle ring containing from about 2 to about 20 carbon atoms; a neutral hydrocarbyl-containing donor ligand; a [halogen, an alkoxide, an aryloxy, an amide, a phosphide, or other] univalent anionic ligand; or two X's are joined to form an anionic chelating ligand; or a neutral non-hydrocarbyl atom containing donor ligand; and r is 1, 2 or 3.

17. (Twice Amended) The catalyst system of claim 13 wherein said complex [is] has been treated with a noncoordinating anion precursor to form an ionic catalyst comprising a metal cation and a noncoordinating anion.